

COKE PLANTS IN THE UNITED STATES ON DECEMBER 31, 1959

By Joseph A. DeCarlo and Maxine M. Otero

* * * * * information circular 7996



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by

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SUMMARY AND INTRODUCTION

This publication presents a tabulation of oven- and beehive-coke plants in the United States as well as pertinent statistical data on the number, capacity, kind, and condition of the ovens. Coke is an essential raw material in pig-iron production and the coal-chemical materials produced during the coking process are used to manufacture fertilizers, paints, plastics, synthetic rubber, explosives, detergents, nylon, pharmaceuticals, dyes, and many other products necessary to the high standard of living in this country.

In table 1 the oven-coke plants in the United States on December 31, 1959, are listed. This shows the name and address of the company, location of the plant, classification or type of ownership, number and type of ovens, annual coke capacity, and the coal-chemical materials produced. The "furnace" plants are those owned by iron and steel companies and most of them are integrated with blast furnaces to facilitate transportation of raw materials for steel making. Furnace plants represented 87 percent of the total coking capacity and their average annual capacity was 1.3 million tons. The "merchant" plants are those associated with chemical companies, gas utilities, as well as those that produce metallurgical, industrial, and residential-heating grades of coke and coal-chemical materials for sale on the open market. These coke plants are smaller than furnace plants and in 1959 their average coke capacity was only 520 thousand tons annually. On December 31, 1959, there were 54 furnace and 20 merchant oven-coke plants in existence in the United States.

Only 101 slot-type ovens were added to the coke industry in 1959. The Kaiser Steel Corp. at Fontana, Calif., brought in 90 new Koppers-Becker ovens and the Great Lakes Carbon Corp. at St. Louis, Mo., repaired 11 of their Koppers ovens. At the end of 1959, 118 Wilputte ovens were under construction at the Pittsburgh, Pa., plant of the Jones & Laughlin Steel Corp. and during the year 352 ovens were either abandoned or taken out of production for repairs. Of these ovens, 10 were blanked off in operating batteries, 25 were dismantled for rebuilding, and 317 were permanently abandoned. There was a net loss of 251 ovens and on December 31, 1959, there were 15,993 ovens in existence with an annual coke capacity of 81,447,700 net tons.

Tables 2 and 3 show the operable ovens and their capacities at the end of 1959. The figures do not include any ovens that were blanked off or retired

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permanently during the year nor any ovens under construction at the end of the year. This partly accounts for the difference between the coke ovens reported by the American Iron & Steel Institute and those published by the Bureau of Mines. The AISI also includes the Everett, Mass., plant of the Eastern Gas & Fuel Associates in their listing of furnace coke plants and the Bureau of Mines does not.

As a result of the recent construction and modernization programs undertaken by iron and steel companies, 40 percent of the ovens at furnace plants was under 10 years old compared with only 10 percent for the merchant ovens (table 4). The average age of ovens at furnace plants was 17 years in 1959, and, since no new construction has taken place at merchant plants since 1955, the average age had risen to 33 years.

Table 7 presents a history of the slot-type coke ovens since their introduction in the United States in 1893 when 12 Semet-Solvay ovens were put into operation at Syracuse, N.Y. New ovens constructed, old ovens abandoned, and those in existence at the end of each year show the growth of the oven-coke industry in the United States.

The beehive-coke industry has been steadily declining since the introduction of the slot-type coke oven. Before 1893, beehive ovens supplied all the coke necessary for pig-iron production but gradually gave way to the slot-type oven which not only produced coke but many coal-chemical materials. During World War I, the beehive industry supplied about 60 percent of the total coke production but in 1919 took second place to production from slot-type ovens. The beehive ovens were again pressed into service during World War II when more than 100 plants were in operation. At the close of the war many were shut down but were reactivated during the Korean War. In 1959, only 45 plants were in existence at the end of the year with 7,448 ovens and only 5,148 of those were in operating condition. Only 9 beehive plants operated during the entire year in 1959.

The oven-coke industry is a major source of chemical raw materials. Most of the basic coal-chemical materials (ammonia, crude tar, and crude light oil) are processed by the coke-producing companies into many products. Ammonia is converted into ammonium sulfate, di- and mono-ammonium phosphate, or an aqueous solution known as ammonia liquor. Some coke plants also have tar- and light-oil-refining facilities and produce creosote oil, crude chemical oil (tar-acid oil), naphthalene, cresols, and pitch from the crude tar and benzene, toluene, xylene, and solvent naphtha from the crude light oil.

Coal-chemical materials produced at individual coke plants in 1959 are designated as follows:

- | | |
|--|---------------------------------------|
| 1 - Ammonium sulfate. | 14 - Refined tar, including road tar. |
| 2 - Ammonia liquor. | 15 - Pitch coke. |
| 3 - Ammonium thiocyanate. | 16 - Crude light oil. |
| 4 - Diammonium phosphate. | 17 - Benzene. |
| 5 - Monoammonium phosphate. | 18 - Toluene. |
| 6 - Crude coal tar. | 19 - Xylene. |
| 7 - Creosote oil. | 20 - Solvent naphtha. |
| 8 - Crude chemical oil (tar acid oil). | 21 - Intermediate light oil. |
| 9 - Sodium phenolate. | 22 - Naphthalene, under 74° C. |
| 10 - Phenol (industrial grades). | 23 - Naphthalene, 74° to 79° C. |
| 11 - Cresols. | 24 - Pyridine, crude bases. |
| 12 - Cresylic acid. | 25 - Pyridine, refined (2° C.) |
| 13 - Pitch of tar. | 26 - Picolines. |

ACKNOWLEDGMENT

The information used in this publication was obtained from annual reports voluntarily furnished by all coke-producing companies in the United States. Their cooperation is deeply appreciated by the Bureau of Mines.

TABLE 1. - Oven-coke plants in the United States on December 31, 1959

Name and address of company	Location of plant	Classification of plant	Number and type of ovens	Annual coke capacity (net tons)	Coal-chemical materials produced
<u>ALABAMA</u> Alabama Byproducts Corp. P. O. Box 354 Birmingham 1, Ala.	Tarrant	Merchant	75 Koppers 128 Koppers-Becker	900,000	1,6,9,16,17,18, 19,20,21,22
DeBardeleben Coal Corp. 2201 First Ave., North Birmingham 3, Ala.	Holt	do.	60 Semet-Solvay	200,000	1,6,8,14,16,21
Republic Steel Corp. Republic Bldg. Cleveland 1, Ohio	Gadsden	Furnace	37 Koppers 65 Wilputte	565,000	1,6,16,17,18, 19,22,23
United States Pipe & Foundry Co. 3300 First Ave., North Birmingham 2, Ala.	Thomas Birmingham	do. do.	65 Koppers-Becker 120 Semet-Solvay 120 Koppers-Becker	375,000 1,175,000	1,6,16,17,18,22 1,2,6,16,17,18, 19,21,22,24
United States Steel Corp. 525 William Penn Pl. Pittsburgh 30, Pa.	Fairfield	do.	499 Koppers-Becker 63 Otto	3,096,900	1,6,7,13,16,17, 18,19,20,23,24
Woodward Iron Co. Woodward, Ala.	Woodward	do.	226 Koppers 30 Koppers-Becker	938,000	1,6,16,17,18, 19,20,23
<u>CALIFORNIA</u> Kaiser Steel Corp. 1924 Broadway Oakland 12, Calif.	Fontana	Furnace	315 Koppers-Becker	1,450,000	4,6,10,16,17, 18,19,20
<u>COLORADO</u> Colorado Fuel & Iron Corp. P. O. Box 316 Pueblo, Colo.	Pueblo	Furnace	100 Koppers 137 Koppers-Becker	985,500	4,6,7,13,16,17, 18,19,20
<u>CONNECTICUT</u> Connecticut Coke Co. P. O. Box 1820 New Haven, Conn.	New Haven	Merchant	70 Koppers-Becker	410,000	1,6,16,21

ILLINOIS

General Motors Corp.	Waukegan	Merchant	31 Koppers-Becker	76,000	6
General Motors Bldg. Detroit 2, Mich.	Granite City	Furnace	76 Koppers-Becker	450,000	1,6,16,17,18, 19,21,22
Granite City Steel Co. 20th & Madison Ave. Granite City, Ill.	Chicago	do.	100 Wilputte	558,000	1,6,16
Interlake Iron Corp. 1900 Union Commerce Bldg. Cleveland 14, Ohio	South Chicago	do.	155 Wilputte	750,000	1,6,16,17,18, 19,20
International Harvester Co. 180 North Michigan Ave. Chicago 17, Ill.	Chicago	do.	75 Wilputte	460,000	1,6,9,16,17,18, 19,20,22,23,24
Republic Steel Corp. Republic Bldg. Cleveland 1, Ohio	South Chicago	do.	70 Koppers-Becker	420,000	1,6,16
Youngstown Sheet & Tube Co. P. O. Box 900 Youngstown 1, Ohio					

INDIANA

Citizens Gas & Coke Utility	Indianapolis	Merchant	41 Koppers-Becker 127 Wilputte	516,700	1,6
2020 North Meridian St. Indianapolis 9, Ind.	Terre Haute	do.	60 Koppers	175,000	2,6,16,17,18, 19,20,22
Indiana Gas & Chemical Corp. 13th & Hulman Sts. Terre Haute, Ind.	Indiana Harbor	Furnace	531 Koppers-Becker	2,847,000	1,6,9,16,17, 18,19,24
Inland Steel Co. 30 West Monroe St. Chicago 3, Ill.	Gary	do.	280 Koppers 357 Koppers-Becker 525 Wilputte	5,654,500	1,6,13,16,17, 18,19,20,23
United States Steel Corp. 525 William Penn Pl. Pittsburgh 30, Pa.	Indiana Harbor	do.	150 Koppers-Becker 120 Semet-Solvay	1,572,000	2,6,9,16,17, 18,19,20
Youngstown Sheet & Tube Co. P. O. Box 900 Youngstown 1, Ohio					

See footnote at end of table.

TABLE 1. - Oven-coke plants in the United States on December 31, 1959 (Con.)

Name and address of company	Location of plant	Classification of plant	Number and type of ovens	Annual coke capacity (net tons)	Coal-chemical materials produced
KENTUCKY Allied Chemical Corp. 40 Rector St. New York 6, N. Y.	Ashland	Merchant	120 Semet-Solvay 76 Wilputte	1,185,200	2,6,8,16
MARYLAND Bethlehem Steel Co. Bethlehem, Pa.	Sparrows Point	Furnace	758 Koppers-Becker	4,174,000	1,6,16,17,18, 19,21,22
MASSACHUSETTS Eastern Gas & Fuel Associates 250 Stuart St. Boston 16, Mass.	Everett	Merchant	108 Koppers-Becker	665,000	1,3,6,16,17,18, 19,20,23
MICHIGAN Allied Chemical Corp. 40 Rector St. New York 6, N. Y. Ford Motor Co. The American Road Dearborn, Mich. Great Lakes Steel Corp. Ecorse, Detroit 29, Mich. Wyandotte Chemicals Corp. 1609 Biddle Ave. Wyandotte, Mich.	Detroit Rouge Zug Island Wyandotte	Merchant Furnace do. Merchant	216 Semet-Solvay 220 Koppers-Becker 146 Semet-Solvay 148 Wilputte 39 Koppers-Becker	643,500 1,460,000 2,103,000 210,000	2,6,8,16 4,6,16,22 1,6,8,9,16,17, 18,19,22 2,6,16,17,18, 19
MINNESOTA Interlake Iron Corp. 1900 Union Commerce Bldg. Cleveland 14, Ohio Koppers Co., Inc. Koppers Bldg. Pittsburgh 19, Pa. United States Steel Corp. Rockefeller Bldg. Cleveland 13, Ohio	West Duluth St. Paul Duluth	Furnace Merchant Furnace	41 Koppers-Becker 20 Wilputte 65 Koppers 115 Koppers-Becker	310,000 190,000 583,600	1,6 6 1,6

MISSOURI

Great Lakes Carbon Corp.
18 East 48th St.
New York 17, N. Y.

56 Koppers
40 Simon-Carves
327,600
6,16,17,18,19,
20

NEW JERSEY

Koppers Co., Inc.
Koppers Bldg.
Pittsburgh 19, Pa.

165 Koppers
65 Koppers-Becker
1,100,000
5,6,16,21,22

NEW YORK

Allied Chemical Corp.
40 Rector St.
New York 6, N. Y.
Bethlehem Steel Co.
Bethlehem, Pa.

120 Semet-Solvay
900,100
2,6,8,16
171 Koppers-Becker
60 Semet-Solvay
228 Wilputte
186 Koppers
65 Koppers-Becker
2,514,000
1,115,000
1,6,8,9,13,16,
17,18,19,21
1,6,9,16,17,18,
19,20,22,24,25

Donner-Hanna Coke Corp.
Box A, South Park Station
Buffalo 20, N. Y.

do.
do.
do.

OHIO

Allied Chemical Corp.
40 Rector St.
New York 6, N. Y.
Armco Steel Corp.
703 Curtis St.
Middletown, Ohio
Detroit Steel Corp.
Detroit, Mich.
Diamond Alkali Co.
300 Union Commerce Bldg.
Cleveland 14, Ohio
Interlake Iron Corp.
1900 Union Commerce Bldg.
Cleveland 14, Ohio

68 Semet-Solvay
100 Wilputte
1,124,200
2,6,8,16,24
85 Koppers-Becker
76 Wilputte
550,000
550,000
1,6,8,13,16,22
1,6,9,16,17,18,
19,20,21
500,000
2,6,7,13,16,17,
19,22
176,300
2,6,16,17,18,
19,20
94 Koppers
57 Wilputte
518,000
1,6,16,17,18,
19,22

See footnote at end of table.

TABLE 1. - Oven-coke plants in the United States on December 31, 1959 (Con.)

Name and address of company	Location of plant	Classification of plant	Number and type of ovens	Annual coke capacity (net tons)	Coal-chemical materials produced
OHIO (Con.)					
Republic Steel Corp.	Cleveland	Furnace	354 Koppers-Becker	2,085,000	1,6,16,17,18, 19,20,22
Republic Bldg.	Massillon	do.	31 Koppers-Becker	188,000	1,6,16,22
Cleveland 1, Ohio	Warren	do.	80 Koppers	870,000	1,6,16,17,18, 19,20,22,23
	Youngstown	do.	61 Wilputte		1,6,16,17,18, 19,20,22,24
	Cleveland	do.	103 Koppers	1,000,000	1,6,16,17,18, 19,20,22,24
United States Steel Corp.			69 Koppers-Becker	834,400	1,6,16,17,18, 19,20,22
Rockefeller Bldg.			180 Koppers		
Cleveland 13, Ohio					
United States Steel Corp.	Lorain	do.	177 Koppers-Becker	1,869,000	1,6,10,16,17, 18,19,20,23
525 William Penn Pl.			236 Wilputte		
Pittsburgh 30, Pa.	Campbell	do.	153 Koppers	2,012,000	1,6,16,17,18, 19
Youngstown Sheet & Tube Co.	Youngstown	do.	228 Wilputte	372,000	1,6,16
P. O. Box 900			84 Koppers		
Youngstown 1, Ohio					
PENNSYLVANIA					
Alan Wood Steel Co.	Swedeland	Furnace	110 Koppers	600,000	1,6,9,16,17,18, 19,20,22,24
Conshohocken, Pa.	Bethlehem	do.	41 Koppers-Becker		1,6,16,17,18, 19,22
Bethlehem Steel Co.			212 Koppers	2,136,000	
Bethlehem, Pa.	Johnstown	do.	284 Koppers-Becker	1,836,000	1,6,8,13,16, 17,18,19,21
			77 Koppers-Becker		
			88 Semet-Solvay	768,000	1,6,16
	Steelton	do.	151 Wilputte		1,6,8,9,13,16, 17,18,19,21
	Midland	do.	130 Koppers-Becker	877,200	
			100 Koppers		
			113 Koppers-Becker		
Crucible Steel Co. of America					
P. O. Box 88	Erie	do.	58 Wilputte	267,000	1,6,9,16,17,18, 19,20,22,24
Pittsburgh 30, Pa.					
Interlake Iron Corp.					
1900 Union Commerce Bldg.					
Cleveland 14, Ohio					
Jones & Laughlin Steel Corp.	Alliquippa	do.	352 Koppers-Becker	1,935,000	1,6,9,16,17,18, 19,20
3 Gateway Center	Pittsburgh	do.	300 Koppers	1,200,000	1,6,7,8,9,13, 16,25,26
Pittsburgh 30, Pa.			79 Koppers-Becker	720,000	
			1/ 118 Wilputte		

PENNSYLVANIA (Con.)

Eastern Gas & Fuel Associates	Philadelphia	Merchant	74 Koppers-Becker	490,000	1,6,16,21,22
4501 Richmond St. Philadelphia 37, Pa.	Chester	do.	25 Koppers-Becker	118,000	6,16
Philadelphia Electric Co.	Neville Island	Furnace	105 Koppers-Becker	750,000	1,6,7,10,11,12, 13,14,16,17,18, 19,20,23,25,26
1000 Chestnut St. Philadelphia 5, Pa.	Monessen	do.	93 Koppers-Becker	600,000	1,6,9,16,17,21
Pittsburgh Coke & Chemical Co.	Clairton	do.	469 Koppers 592 Koppers-Becker 506 Wilputte	))) 7,833,800	1,6,7,10,11,12, 13,16,17,18,19, 20,22,23,24,25, 26
2100 Grant Bldg. Pittsburgh 19, Pa.	Fairless	do.	174 Wilputte	1,039,300	1,6,9,16,17,18, 19,20,22
Pittsburgh Steel Co.					
1600 Grant Bldg. Pittsburgh 19, Pa.					
United States Steel Corp.					
525 William Penn Pl. Pittsburgh 30, Pa.					
TENNESSEE					
Tennessee Products & Chemical Corp. ...	Alton Park	Furnace	24 Semet-Solvay 20 Wilputte	)) 264,000	1,6,16,17,18, 19,22
P. O. Box 9 Nashville, Tenn.					
TEXAS					
Armco Steel Corp.	Houston	Furnace	62 Koppers-Becker	394,000	6,16,17,18,19, 21
703 Curtis St. Middletown, Ohio	Daingerfield	do.	78 Koppers-Becker	438,000	1,6,16,17,18, 19,20
Lone Star Steel Co.					
P. O. Box 12226 Dallas 25, Texas					
UTAH					
United States Steel Corp.	Geneva Ironton	Furnace do.	252 Koppers-Becker 56 Koppers-Becker	1,094,800 250,900	) 1,6,9,16,17,) 18,19,20,22
525 William Penn Pl. Pittsburgh 30, Pa.					
WEST VIRGINIA					
Olin Mathieson Chemical Corp.	Morgantown	Merchant	74 Wilputte	416,100	Idle
Mathieson Bldg. Baltimore 3, Md.					

See footnote at end of table.

TABLE 1. - Oven-coke plants in the United States on December 31, 1959 (Con.)

Name and address of company	Location of plant	Classification of plant	Number and type of ovens	Annual coke capacity (net tons)	Coal-chemical materials produced
WEST VIRGINIA (Con.)					
National Steel Corp.	Weirton	Furnace	294 Koppers-Becker	1,900,000	1,6,8,9,13,16,17,18,19,20,24
Weirton, W. Va.	Fairmont	do.	60 Koppers	245,000	1,6,9,16,17,18,19,20,22
Sharon Steel Corp.	East Steubenville	do.	94 Koppers	1,720,000	1,6,9,16,17,18,19,20,24
Sharon, Pa.			220 Koppers-Becker		
Wheeling Steel Corp.					
Wheeling, W. Va.					
WISCONSIN					
Milwaukee Solvay Coke Co.	Milwaukee	Merchant	100 Koppers	570,100	2,6,16,17,18,19,20
311 East Greenfield Ave.			100 Somet-Solvay		
Milwaukee, Wis.					
Total in existence	-	-	15,993	81,447,700	-
At merchant plants	-	-	2,249	10,393,800	-
At furnace plants	-	-	13,744	71,053,900	-
Total under construction	-	-	118	720,000	-
At merchant plants	-	-	-	-	-
At furnace plants	-	-	118	720,000	-
1/ Under construction.					

TABLE 2. - Slot-type coke ovens completed and abandoned in the United States in 1959 and number in existence on December 31, by States

State	Plants in existence Dec. 31 1/	Ovens						Abandoned during year 2/	Under construction Dec. 31	
		In existence Dec. 31		New		Number	Annual coke capacity (net tons)		Number	Annual coke capacity (net tons)
		Number	Annual coke capacity (net tons)	Number	Annual coke capacity (net tons)					
Alabama	7	1,488	7,249,900	.....	.....	.....	.....	.....	.....	
California	1	315	1,450,000	90	380,500	.....	.....	.....	.....	
Colorado	1	237	985,500	.....	.....	9	.....	.....	.....	
Connecticut	1	70	410,000	.....	.....	.....	.....	.....	.....	
Illinois	6	507	2,714,000	.....	.....	.....	.....	.....	.....	
Indiana	5	2,191	10,765,200	.....	.....	.....	.....	.....	.....	
Kentucky	1	196	1,185,200	.....	.....	.....	.....	.....	.....	
Maryland	1	758	4,174,000	.....	.....	.....	.....	.....	.....	
Massachusetts	1	108	665,000	.....	.....	.....	.....	.....	.....	
Michigan	4	769	4,416,500	.....	.....	.....	.....	.....	.....	
Minnesota	3	241	1,083,600	.....	.....	.....	.....	.....	.....	
Missouri	1	96	327,600	11	25,900	.....	.....	.....	.....	
New Jersey	1	230	1,100,000	.....	.....	111	.....	.....	.....	
New York	3	830	4,529,100	.....	.....	1	.....	.....	.....	
Ohio	14	2,390	12,648,900	.....	.....	125	.....	.....	.....	
Pennsylvania	14	4,133	20,450,300	.....	.....	35	118	720,000	.....	
Tennessee	1	44	264,000	.....	.....	.....	.....	.....	.....	
Texas	2	140	832,000	.....	.....	.....	.....	.....	.....	
Utah	2	308	1,345,700	.....	.....	.....	.....	.....	.....	
West Virginia	4	742	4,281,100	.....	.....	71	.....	.....	.....	
Wisconsin	1	200	570,100	.....	.....	.....	.....	.....	.....	
Total 1959	74	15,993	81,447,700	101	406,400	352	118	720,000	.....	
At merchant plants	20	2,249	10,393,800	11	25,900	182	.....	.....	.....	
At furnace plants	54	13,744	71,053,900	90	380,500	170	118	720,000	.....	
Total 1958	77	16,244	82,497,900	808	4,349,400	461	149	793,600	.....	

1/ Excludes plants retired permanently during year. 2/ Includes ovens dismantled for rebuilding.

TABLE 3. - Potential maximum annual coke capacity of all oven-coke plants in existence in the United States, 1949 and 1955-59

Year	At merchant plants				At furnace plants				Total			
	In existence Dec. 31		Potential maximum annual coke capacity (net tons)	Change from 1949 (percent)	In existence Dec. 31		Potential maximum annual coke capacity (net tons)	Change from 1949 (percent)	In existence Dec. 31		Potential maximum annual coke capacity (net tons)	Change from 1949 (percent)
	Plants	Ovens			Plants	Ovens			Plants	Ovens		
1949	30	3,057	14,209,200	.....	55	12,047	59,500,900	.....	85	15,104	73,710,100	.....
1955	23	2,482	11,220,200	-21.0	58	13,557	68,455,300	+15.0	81	16,039	79,675,500	+8.1
1956	22	2,424	11,009,600	-22.5	57	13,499	68,955,500	+15.9	79	15,923	79,965,100	+8.5
1957	22	2,420	11,061,400	-22.2	56	13,477	69,238,000	+16.4	78	15,897	80,299,400	+8.9
1958	22	2,420	11,030,800	-22.4	55	13,824	71,467,100	+20.1	77	16,244	82,497,900	+11.9
1959	21	2,249	10,393,800	-26.9	54	13,744	71,053,900	+19.4	75	15,993	81,447,700	+10.5

TABLE 4. - Age of slot-type coke ovens in the United States on December 31, 1959 1/

Age	At merchant plants		At furnace plants		Total			
	Number	Annual coke capacity (net tons)	Number	Annual coke capacity (net tons)	Number	Percent of total	Annual coke capacity (net tons)	Percent of total
Under 5 years	.....	.....	1,819	9,610,900	1,819	11.4	9,610,900	11.8
From 5 to 10 years	214	1,050,800	3,725	20,056,800	3,939	24.6	21,107,600	25.9
From 10 to 15 years	163	852,400	2,114	11,571,100	2,277	14.2	12,423,500	15.3
From 15 to 20 years	315	1,855,500	2,393	12,770,400	2,708	16.9	14,625,900	18.0
From 20 to 25 years	35	155,200	1,044	5,992,200	1,079	6.8	6,147,400	7.5
From 25 to 30 years	.....	.....	.....	.....	.....	.....	.....	.....
From 30 to 35 years	447	2,316,100	379	1,934,000	826	5.2	4,250,100	5.2
From 35 to 40 years	125	418,100	218	980,000	343	2.1	1,398,100	1.7
40 years and over	950	3,745,700	2,052	8,138,500	3,002	18.8	11,884,200	14.6
Total	2,249	10,393,800	13,744	71,053,900	15,993	100.0	81,447,700	100.0

Age dates from first entry into operation or from last date of rebuilding.

TABLE 5. - Number of slot-type coke ovens in the United States on December 31, 1959,
by States and kinds

State	Koppers	Koppers-Becker	Semet-Solvay	Wilputte	All others	Total
Alabama	338	842	180	65	1/ 63	1,488
California .....	.....	315	.....	.....	.....	315
Colorado	100	137	.....	.....	.....	237
Connecticut .....	.....	70	.....	.....	.....	70
Illinois .....	.....	177	.....	330	.....	507
Indiana	340	1,079	120	652	.....	2,191
Kentucky .....	.....	.....	120	76	.....	196
Maryland .....	.....	758	.....	.....	.....	758
Massachusetts .....	.....	108	.....	.....	.....	108
Michigan .....	.....	259	362	148	.....	769
Minnesota	65	156	.....	20	.....	241
Missouri	56	.....	.....	.....	2/ 40	96
New Jersey	165	65	.....	.....	.....	230
New York	186	236	180	228	.....	830
Ohio	694	762	176	758	.....	2,390
Pennsylvania	1,191	1,965	88	889	.....	4,133
Tennessee .....	.....	.....	24	20	.....	44
Texas .....	.....	140	.....	.....	.....	140
Utah .....	.....	308	.....	.....	.....	308
West Virginia	154	514	.....	74	.....	742
Wisconsin	100	.....	100	.....	.....	200
Total 1959	3,389	7,891	1,350	3,260	103	15,993
At merchant plants	521	627	684	377	40	2,249
At furnace plants	2,868	7,264	666	2,883	63	13,744
Total 1958	3,378	7,982	1,450	3,331	103	16,244

1/ Otto. 2/ Simon-Carves.

TABLE 6. - Number and capacity of coke ovens in the United States
on December 31, 1959, by kinds

Type	Number of ovens	Annual coke capacity (net tons)
Koppers	3,389	13,587,600
Koppers-Becker	7,891	43,142,200
Semet-Solvay	1,350	6,844,800
Wilputte	3,260	17,348,900
Simon-Carves	40	140,900
Otto	63	383,300
Total	15,993	81,447,700

TABLE 7. - Slot-type coke ovens constructed, abandoned, and in existence in the United States,
1893-1959

Year	Number of ovens constructed			Ovens abandoned			Ovens in existence, end of year		
	Merchant plants	Furnace plants	Total	Merchant plants	Furnace plants	Total	Merchant plants	Furnace plants	Total
1893 ...	12	.....	12	.....	.....	.....	12	.....	12
1894 ...	.....	.....	.....	.....	.....	.....	12	.....	12
1895 ...	.....	60	60	.....	.....	.....	12	60	72
1896 ...	13	75	88	.....	.....	.....	25	135	160
1897 ...	120	.....	120	.....	.....	.....	145	135	280
1898 ...	56	180	236	.....	.....	.....	201	315	516
1899 ...	400	100	500	.....	.....	.....	601	415	1,016
1900 ...	5	60	65	.....	.....	.....	606	475	1,081
1901 ...	80	.....	80	.....	.....	.....	686	475	1,161
1902 ...	151	357	508	.....	.....	.....	837	832	1,669
1903 ...	10	283	293	.....	.....	.....	847	1,115	1,962
1904 ...	286	711	997	.....	33	33	1,133	1,793	2,926
1905 ...	134	79	213	.....	4	4	1,267	1,868	3,135
1906 ...	185	301	486	.....	2	2	1,452	2,167	3,619
1907 ...	177	112	289	.....	.....	.....	1,629	2,279	3,908
1908 ...	.....	140	140	.....	25	25	1,629	2,394	4,023
1909 ...	116	142	258	288	.....	288	1,457	2,536	3,993
1910 ...	40	49	89	.....	.....	.....	1,472	<u>1/</u> 2,610	4,082
1911 ...	.....	550	550	.....	4	4	1,472	3,156	4,628
1912 ...	110	500	610	.....	26	26	1,582	3,630	5,212
1913 ...	186	332	518	.....	.....	.....	1,768	3,962	5,730
1914 ...	23	205	228	.....	297	298	1,690	<u>2/</u> 3,970	5,660
1915 ...	111	559	670	1	92	92	1,801	4,437	6,238
1916 ...	132	870	1,002	.....	.....	.....	1,933	5,307	7,240
1917 ...	210	369	579	.....	.....	.....	2,143	5,676	7,819
1918 ...	164	<u>1,636</u>	1,800	12	378	390	<u>3/</u> 2,271	<u>6,958</u>	9,229
1919 ...	165	895	1,060	.....	146	146	2,436	7,707	10,143
1920 ...	110	934	1,044	40	376	416	2,506	8,265	10,771
1921 ...	195	190	385	143	70	213	<u>4/</u> 2,798	8,145	10,943
1922 ...	55	230	285	40	140	180	2,813	8,235	11,048
1923 ...	25	195	220	.....	224	224	2,838	8,206	11,044
1924 ...	74	672	746	330	47	377	2,582	8,831	11,413
1925 ...	270	134	404	.....	539	539	2,852	8,426	11,278

1926	...	240	537	777	145	199	344	5/ 3,127	8,584	11,711
1927	...	262	728	990	104	122	226	3,285	9,190	12,475
1928	...	197	242	439	176	199	375	3,306	9,233	12,539
1929	...	150	200	350	53	192	245	3,403	9,241	12,644
1930	...	268	265	533	242	164	406	3,429	9,342	12,771
1931	...	93	.....	93	.....	.....	.....	3,522	9,342	12,864
1932	...	87	.....	87	2	140	142	3,607	9,202	12,809
1933	...	.....	.....	.....	.....	.....	.....	3,607	9,202	12,809
1934	...	.....	138	138	.....	90	90	3,607	9,250	12,857
1935	...	37	140	177	.....	280	280	3,644	9,110	12,754
1936	...	49	163	212	18	143	161	3,675	9,130	12,805
1937	...	25	479	504	281	310	591	3,419	9,299	12,718
1938	...	12	149	161	19	181	200	3,412	9,267	12,679
1939	...	20	307	327	.....	141	141	3,432	9,433	12,865
1940	...	3	.....	3	.....	245	245	3,435	9,188	12,623
1941	...	208	479	687	154	246	400	6/ 3,549	9,361	12,910
1942	...	62	361	423	30	.....	30	3,581	9,722	13,303
1943	...	58	952	1,010	3	57	60	3,406	7/ 10,847	14,253
1944	...	65	503	568	127	114	241	3,344	11,236	14,580
1945	...	.....	176	176	66	180	246	3,234	8/ 11,276	14,510
1946	...	84	157	241	39	218	257	3,205	9/ 11,289	14,494
1947	...	8	553	561	240	87	327	2,973	11,755	14,728
1948	...	.....	583	583	4	168	172	10/ 2,983	10/ 12,156	15,139
1949	...	129	340	469	55	449	504	3,057	12,047	15,104
1950	...	67	485	552	88	586	674	2,962	11/ 12,020	14,982
1951	...	49	647	696	50	309	359	12/ 2,958	12/ 12,361	15,319
1952	...	40	907	947	217	441	658	2,781	12,827	15,608
1953	...	101	926	1,027	189	457	646	2,693	13,296	15,989
1954	...	.....	633	633	235	631	866	2,458	13,298	15,756
1955	...	24	617	641	.....	417	417	2,482	13,498	15,980
1956	...	.....	361	361	58	360	418	2,424	13,499	15,923
1957	...	.....	560	560	4	582	586	2,420	13,477	15,897
1958	...	.....	808	808	.....	461	461	2,420	13,824	16,244
1959	...	11	90	101	182	170	352	2,249	13,744	15,993
1/	25 ovens changed from Merchant to Furnace.	2/	100 ovens changed from Merchant to Furnace.	2/	100 ovens changed from Merchant to Furnace.	2/	100 ovens changed from Merchant to Furnace.	2/	100 ovens changed from Merchant to Furnace.	2/
3/	24 ovens changed from Merchant to Furnace.	4/	240 ovens changed from Merchant to Furnace.	4/	240 ovens changed from Merchant to Furnace.	4/	240 ovens changed from Merchant to Furnace.	4/	240 ovens changed from Merchant to Furnace.	4/
5/	180 ovens changed from Merchant to Furnace.	6/	60 ovens changed from Merchant to Furnace.	6/	60 ovens changed from Merchant to Furnace.	6/	60 ovens changed from Merchant to Furnace.	6/	60 ovens changed from Merchant to Furnace.	6/
7/	230 ovens changed from Merchant to Furnace.	8/	44 ovens changed from Merchant to Furnace.	8/	44 ovens changed from Merchant to Furnace.	8/	44 ovens changed from Merchant to Furnace.	8/	44 ovens changed from Merchant to Furnace.	8/
9/	74 ovens changed from Merchant to Furnace.	10/	60 ovens changed from Merchant to Furnace.	10/	60 ovens changed from Merchant to Furnace.	10/	60 ovens changed from Merchant to Furnace.	10/	60 ovens changed from Merchant to Furnace.	10/
74	ovens changed from Merchant to Furnace.	11/	74 ovens changed from Merchant to Furnace.	11/	74 ovens changed from Merchant to Furnace.	11/	74 ovens changed from Merchant to Furnace.	11/	74 ovens changed from Merchant to Furnace.	11/
12/	74 ovens changed from Merchant to Furnace.	12/	74 ovens changed from Merchant to Furnace.	12/	74 ovens changed from Merchant to Furnace.	12/	74 ovens changed from Merchant to Furnace.	12/	74 ovens changed from Merchant to Furnace.	12/

TABLE 8. - Beehive-coke plants in the United States on December 31, 1959

Name and address of company	Name or location of plant	Number and type of ovens available 1/		Annual coke capacity (net tons)
		Machine drawn	Hand drawn	
<u>KENTUCKY</u>				
Blue Diamond Coal Co. 1102 Hamilton Bank Bldg. Knoxville 1, Tenn.	Hellier	193	.....	120,000
<u>PENNSYLVANIA</u>				
<u>FAYETTE COUNTY</u>				
Emerald Coal & Coke Co. 1914 Grant Bldg. Pittsburgh 19, Pa.	Alicia #1	400	.....	308,500
	Allison	395	.....	306,500
United States Steel Corp. 525 William Penn Pl. Pittsburgh 30, Pa.	Collier	389	.....	198,200
Bortz Coal Co. Union Trust Bldg. Uniontown, Pa.	Daugherty	60	.....	40,000
Bridgeview Coal Co. 97 East Main St. Uniontown, Pa.	Donald #2	240	.....	120,000
Clifton Santo 60 Murray Ave. Uniontown, Pa.	Fairbank	60	.....	36,000
National Mines Corp. Weirton, W. Va.	Isabella	136	.....	120,000
Lindsey Coal Co. 602 Johnson Ave. Connellsville, Pa.	Jimtown	.....	20	8,500
Ruane Coal & Coke Co. P. O. Box 485 Fairchance, Pa.	Laughead	60	.....	36,000
United States Steel Corp. 525 William Penn Pl. Pittsburgh 30, Pa.	Leisenring #2	497	.....	264,600
Eberly Coal & Coke Co. 510 Gallatin National Bank Bldg. Uniontown, Pa.	Oliver #2	214	16	128,000
United States Steel Corp. 525 William Penn Pl. Pittsburgh 30, Pa.	Phillips	354	.....	237,300
Leckrone Coal & Coke Co. R. D. #1 - Box 16 McClellandtown, Pa.	Puritan #1 & 2	185	.....	112,000
Fayette Fuel Co. P. O. Box 472 Uniontown, Pa.	Redstone	143	.....	80,000

See footnote at end of table.

TABLE 8. - Beehive-coke plants in the United States on December 31, 1959 (Con.)

Name and address of company	Name or location of plant	Number and type of ovens available 1/		Annual coke capacity (net tons)
		Machine drawn	Hand drawn	
<u>PENNSYLVANIA (Con.)</u>				
	<u>FAYETTE COUNTY</u> (Con.)			
Bortz Coal Co. Union Trust Bldg. Uniontown, Pa.	Sapper	.....	26	8,500
J. H. Hillman & Sons Co. 1914 Grant Bldg. Pittsburgh 19, Pa.	Tower Hill #2	254	.....	209,500
Ruane Coal & Coke Co. P. O. Box 485 Fairchance, Pa.	Wynn	170	.....	108,000
	<u>GREENE COUNTY</u>			
J. H. Hillman & Sons Co. 1914 Grant Bldg. Pittsburgh 19, Pa.	Poland	102	.....	74,300
	<u>INDIANA COUNTY</u>			
Rochester & Pittsburgh Coal Co. 655 Church St. Indiana, Pa.	Coral	158	.....	60,000
	Ernest	264	.....	132,000
Smith-Byrne Co., Inc. P. O. Box 106 Graceton, Pa.	Graceton	125	.....	20,000
Lucerne Coke Co. 812 Oliver St. Pittsburgh 22, Pa.	Lucerne	264	.....	216,000
	<u>WESTMORELAND COUNTY</u>			
Eagle Coal Co. 121 North Main St. Greensburg, Pa.	Atlantic #2	120	.....	60,000
C. W. Dillon Calumet, Pa.	Calumet	.....	110	36,000
Kenallen Coal Co. 543 Locust Valley Rd. Greensburg, Pa.	Carpentertown	100	.....	60,000
Bortz Coal Co. Union Trust Bldg. Uniontown, Pa.	Central	100	.....	35,000
Smith-Byrne Co., Inc. 9 Bryan St. Homer City, Pa.	Duquesne	.....	27	20,000
Kenallen Coal Co. 543 Locust Valley Rd. Greensburg, Pa.	Humphrey	80	.....	48,000
See footnote at end of table.				

See footnote at end of table.

TABLE 8. - Beehive-coke plants in the United States on December 31, 1959 (Con.)

Name and address of company	Name or location of plant	Number and type of ovens available 1/		Annual coke capacity (net tons)
		Machine drawn	Hand drawn	
<u>PENNSYLVANIA (Con.)</u>				
	<u>WESTMORELAND COUNTY</u> <u>(Con.)</u>			
Pittsburgh Coal Co. P. O. Box 500 Library, Pa.	Jamison #2	400	.....	200,000
Westmoreland-Mammoth Coal & Coke Co. Mammoth, Pa.	Mammoth #1	109	20	72,400
George K. Brennen 207 Brennen Bldg. Scottdale, Pa.	Myers	.....	38	8,300
Carpentertown Coal & Coke Co. 1100 Union Trust Bldg. Pittsburgh 19, Pa.	Standard	277	.....	180,000
Hacker Coal & Coke Co. R. D. #3 Latrobe, Pa.	Trauger	.....	32	12,000
Stewart Coal & Coke Co. 118 North Main St. Greensburg, Pa.	Whitney	100	.....	60,000
Hepler Coal & Coke Co. P. O. Box 95 Madison, Pa.	Whyel	33	2	17,200
<u>VIRGINIA</u>				
Wise Coal & Coke Co. Dorchester, Va.	Dorchester	270	.....	140,000
Christie Coal & Coke Co. P. O. Box 409 Norton, Va.	Esserville	.....	71	30,000
Hawthorne Coke & Mining Co. P. O. Box 566 Norton, Va.	Hawthorne	.....	50	24,000
Norton Coal Co. Norton, Va.	Norton	92	.....	51,000
Stonega Coke & Coal Co. Big Stone Gap, Va.	Pine Branch	180	.....	114,000

See footnote at end of table.

TABLE 8. - Beehive-coke plants in the United States on December 31, 1959 (Con.)

Name and address of company	Name or location of plant	Number and type of ovens available 1/		Annual coke capacity (net tons)
		Machine drawn	Hand drawn	
WEST VIRGINIA				
Allied Chemical Corp. 40 Rector St. New York 6, N. Y.	Carbondale	.....	102	52,000
Preston County Coal & Coke Corp. ... Cascade, W. Va.	Cascade	171	23	92,000
Donegan Coal & Coke Co. 530 Fifth Ave. New York 36, N. Y.	Fenwick	.....	50	25,000
Allied Chemical Corp. 40 Rector St. New York 6, N. Y.	Harwood	83	83	88,000
Total		6,778	670	4,368,800

1/ Ovens reported in existence Dec. 31, 1959, whether idle or active.

TABLE 9. - Beehive-coke ovens reconstructed and abandoned in the United States in 1959 and number in existence on December 31, by States

State	Plants in existence Dec. 31	Ovens								Rebuilt of repaired	Abandoned or dis- mantled during year	In course of recon- struction Dec. 31
		In existence Dec. 31		In operating condition Dec. 31		Not in operating condition Dec. 31		Annual coke capacity (net tons)				
		Number	Annual coke capacity (net tons)	Number	Annual coke capacity (net tons)	Number	Annual coke capacity (net tons)					
Kentucky	1	193	120,000	193	120,000	.....	.....	.....	.....	.....	.....	
Pennsylvania ...	35	6,080	3,632,800	4,125	2,568,200	1,955	1,064,600	189	1,425	150	.....	
Virginia	5	663	359,000	626	341,700	37	17,300	.....	.....	3	.....	
West Virginia ..	4	512	257,000	204	101,700	308	155,300	2	.....	.....	.....	
Total 1959 ...	45	7,448	4,368,800	5,148	3,131,600	2,300	1,237,200	191	1,425	153	.....	
Total 1958 ...	53	8,682	5,020,400	5,521	3,320,500	3,161	1,699,900	182	1,019	9	.....	

1/ Idle and not expected to resume production; removed from list of available ovens.